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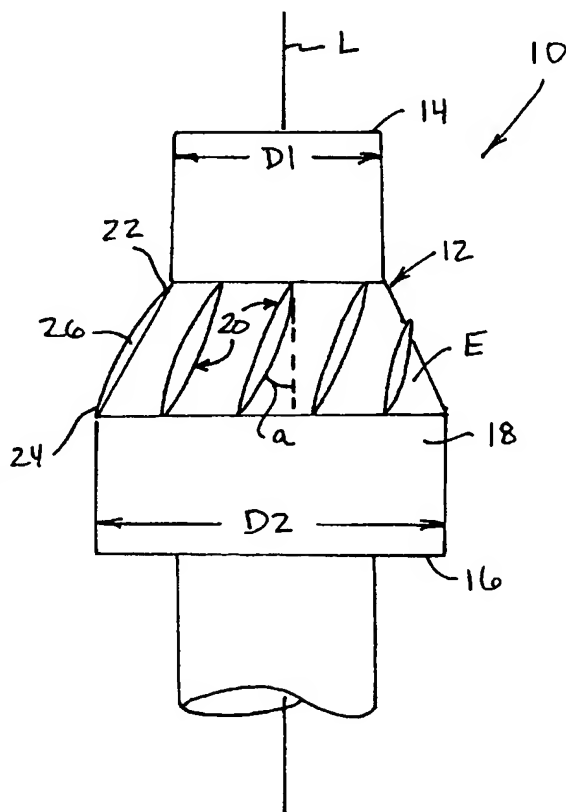


**(10) International Publication Number**  
**WO 2004/026073 A3**

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(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW).

(54) Title: ROTATING MANDREL FOR EXPANDABLE TUBULAR CASING



**(57) Abstract:** An expansion mandrel (10) for expanding tubular casing includes a tapered expansion portion having expansion segments (20) which are angularly disposed on an external surface of the mandrel (10). The segments (20) reduce friction and cause the mandrel (10) to rotate in response to the mandrel (10) being moved through the casing during expansion of the casing.

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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
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claims and to be republished in the event of receipt of  
amendments*

**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *with international search report*


(88) Date of publication of the international search report:  
17 June 2004

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/25715

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : E21B 23/00 US CL : 166/207,384 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 166/207,384,206,380  Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,325,148 A (Trahan et al.) 4 December 2001 (04.12.2001), Fig. 9 and col. 6, lines 10-35.	1-3,6,9,13-15,17,20
X,P	US 6,457,532 A (Simpson) 1 October 2002 (01.10.2002), Figs. 20, 22 24, and col. 12, line 27- col. 14, line 9.	1-7,13-17,19
Y,P		8,10-12,18,21-22
X	US 1,597,212 A (Spengler) 24 August 1926, (24.08.1926), Entire document, particularly Figure 1.	1-5,13-16
Y		8,18
Y,P	US Patent Application Publication 2003/0075338 (Sivley), 24 April 2003 (24.04.2003), Fig. 10 and paragraph 0118 on pages 9-10.	10-12,21,22
X	US 3,039,530 A (Condra) 19 June 1962 (19.06.1962), Fig. 1, col. 1, lines 7-12.	1-3,6,9
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Date of the actual completion of the international search	Date of mailing of the international search report	
04 March 2004 (04.03.2004)	<b>09 APR 2004</b>	
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